

Observations on the Impact of Leased Facilities to the Fire Protection Program

DOE Fire Protection Conference

Las Vegas, Nevada

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Old Facility



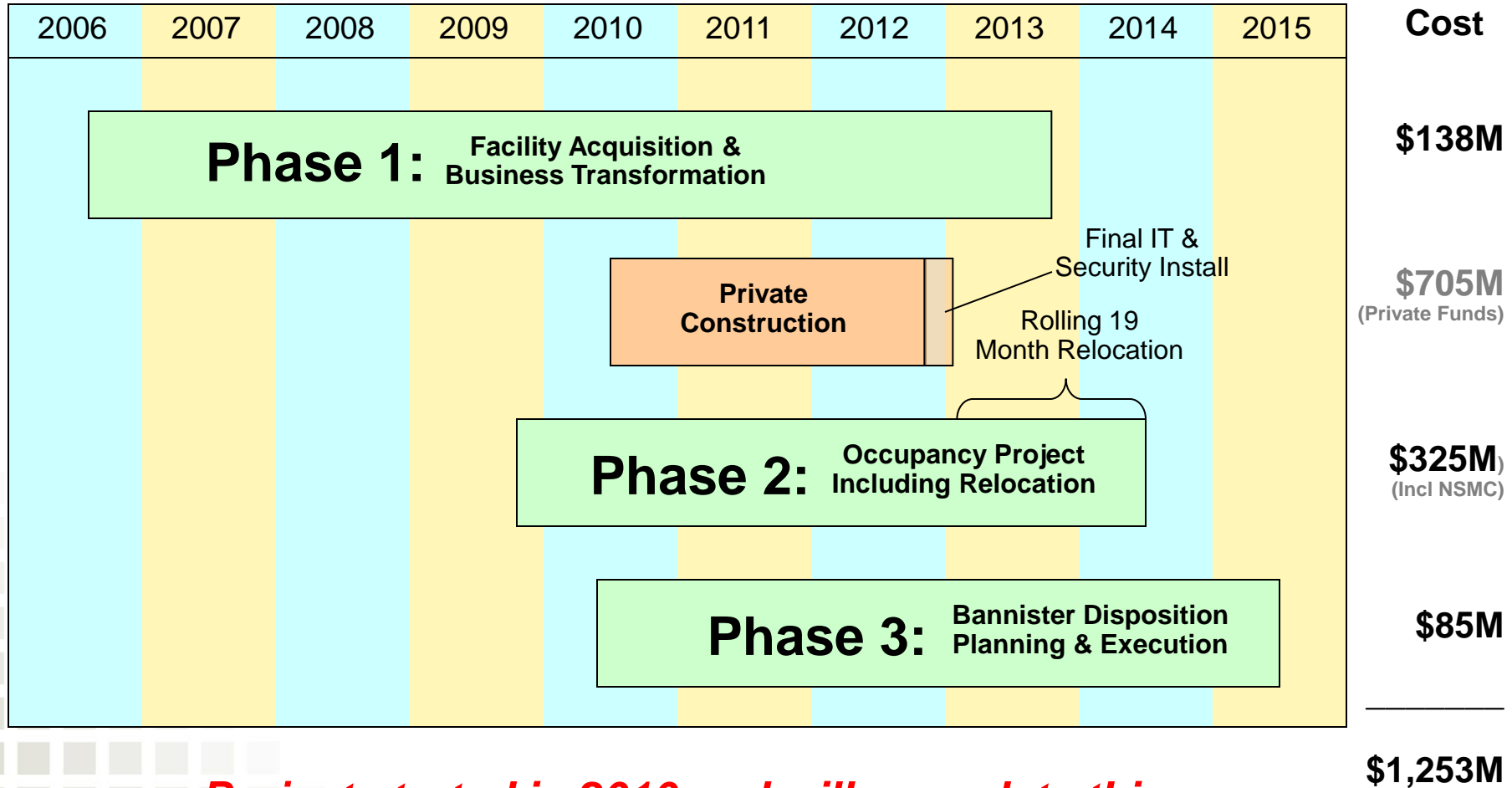
- 136 land acres
- 38 buildings
- 3.2M sq. ft.
- \$ 3.0B total value
- ~ 50 MFL areas
- Largest MFL - \$250M
- ~2510 FTES

New Facility (will be completed this year)

- **Leased bldg.**
- Located in south KC
- 7 miles south of old facility
- 191 land acres
- 5 buildings
- 1.5M sq. ft.
- \$650M bldg. cost
- \$1.2B total project cost (including move cost)
- Manufacturing Bldg. MFL
 - Manuf. – \$411M
 - Stores - \$1B
- ~3200 FTES
- Move –in
 - Start 1/2013
 - End 7/2014



Transformation Schedule Summary



Project started in 2010 and will complete this summer.

Fire Protection Requirements

Old Facility

Performance Driven - 1st

Code Driven - 2nd

- DOE order 420.1
- NFPA codes (all)
- Factory Mutual (guidance)

New Facility

Code Driven

- DOE order 420.1
- NFPA codes (all)
- Factory Mutual (guidance)
- City Building Codes
- International Building Codes
- International Fire Code (2006)

Fire Protection Staffing

Old Facility

- DOE/NNSA FPE – 0
- Honeywell FPE Staff – 13
1
- Subcontractor FPE -1
- Fire Brigade – 12 - 20
- First Aid (provided by Security)
- Emergency Management -
1

New Facility

- DOE/NNSA FPE – 0
- Honeywell FPE – 1
- Subcontractor FPE -1
- Fire Brigade - 0
- First Aid/First Responder (provided by Security)
- Emergency Management - 1

Emergency Management

Old Facility

Fire Department

NFPA 600 – (1970 - 2008)

**Fire Responder and ITM
and KC Fire Dept (2008 -
2014)**

Response time –

Fire Brigade – 3 min

KC Fire Dept – 5-7

min

New Facility

Fire Department

KC Fire Dept

Response time –

In House First Responder* – 3
Min

KC Fire w/ EMT – 5 min

KC Ambulance – 12 min**

* 1st Aid, AED, CPR, and Blood Borne Pathogens

**Just identified - On June 30, 2014 the nearest KC
Dept is being closed which will adversely effect
response time - being worked.

Insurance

Old Facility

- Building – Government (self insured)
- Content - Government (self insured)
- Business Interruption (Mission Impact) - Government (self insured)

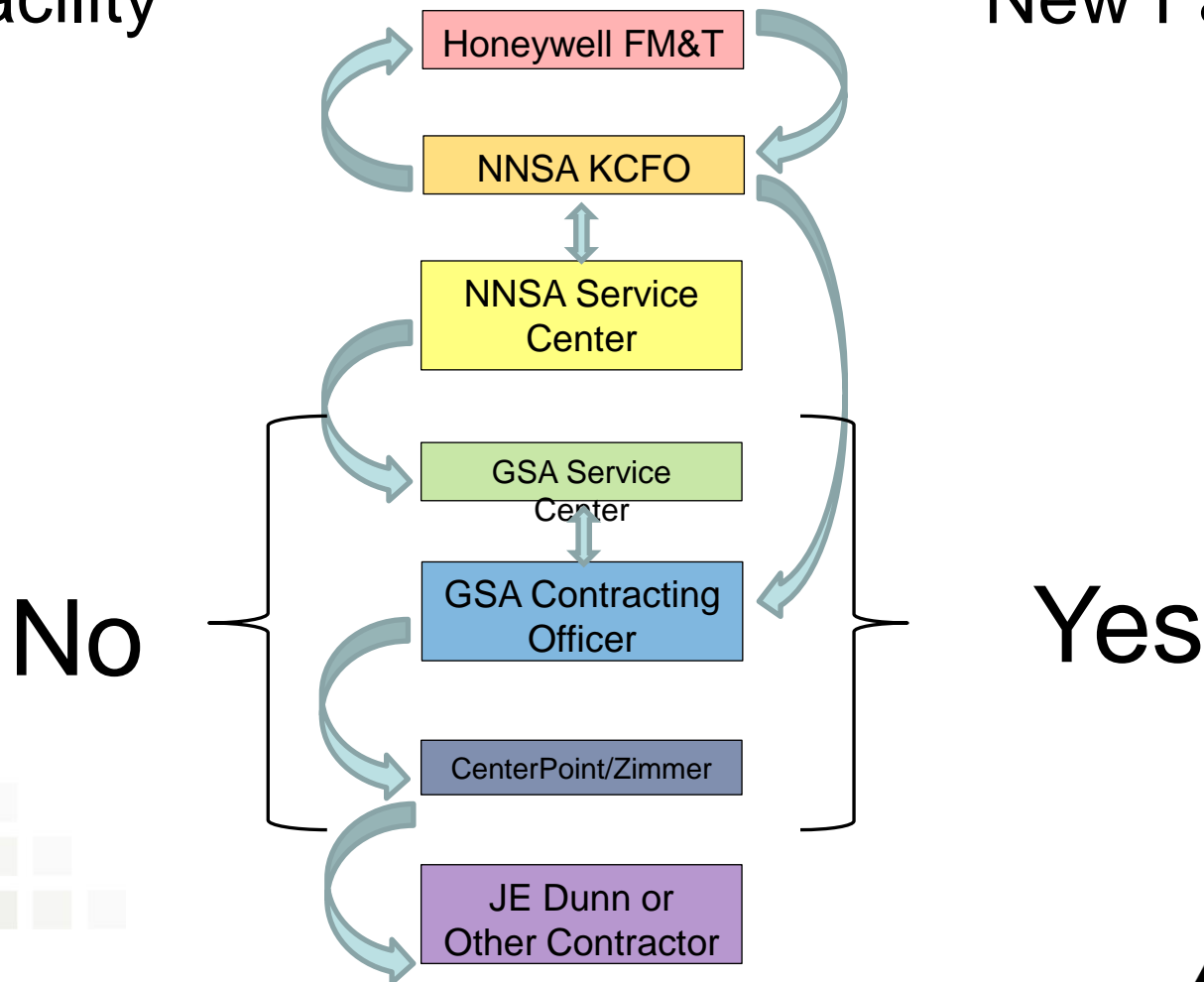
New Facility

- Building – Privately insured - \$1.16M
- Content - Government (self insured)
- Business Interruption (Mission Impact) - Government (self insured)

Project/Work Request

Old Facility

New Facility



Players

Old Facility

- NNSA
- Prime Contractor (Honeywell)

New Facility

- NNSA
- Prime Contractor (Honeywell)
- GSA
- Fire Marshall
- City Building Code Official
- Building Owner
 - Building Owners insurance company
 - A&E
 - Fire Protection Consultant

Authority Having Jurisdiction

Old Facility

Operations and Building

- DOE/NNSA Hq
- NNSA Field Office

Delegated to:

- Prime Contractor

Delegated to:

- Fire Protection Engineer

New Facility

Operations

- DOE/NNSA Hq
- NNSA Field Office (Area Manager)

Note – All Issues (Big and Small)

Building

- City of Kansas City, Mo.

Fire Protection ITM

Old Facility

- NFPA 25 except:
 - 5 yr internal pipe inspection
- All done in house
- Honeywell FTEs - 12

New Facility

- NFPA 25 – no exceptions
- Performed by building owner
- Honeywell FTEs - 0
- Oversight by Honeywell
- Fire main loop testing – performed by subcontractor at Honeywell request and DOE expense (no code driver for the building owner)

Code Modification Request

(Fire Protection Related only)

Old Facility

0

New Facility

- Chemical Storage building – no sprinklers and unlimited H3/H4 (original and 1 revision)
- PVC exhaust ducts not meeting smoke rating
- 1 hr rated roof under penthouse
- Office building firewall not independently supported
- MFL wall downgraded to fire barrier caused by pipe penetrations
- Use of ESFR sprinklers without roof vents

We are playing well with the City AHJ

Exemptions/Equivalencies

Old Facility

Exemptions

- 100% horizontal exits
- Excess travel distance
- Cooling tower construction
- ITM frequency on loop testing

Equivalencies

- Life Safety travel distance
- MFL walls 2 hr instead of 4 hr
- MFL walls with pipe penetrations
- Emergency lights not meeting ft-candles
- NFPA 25 sprinkler sampling camera inspection

Major

New Facility

Exemptions

- Excessive MFL (\$1B)
- Non FM approved cooling tower (no AS) - pending

Equivalencies

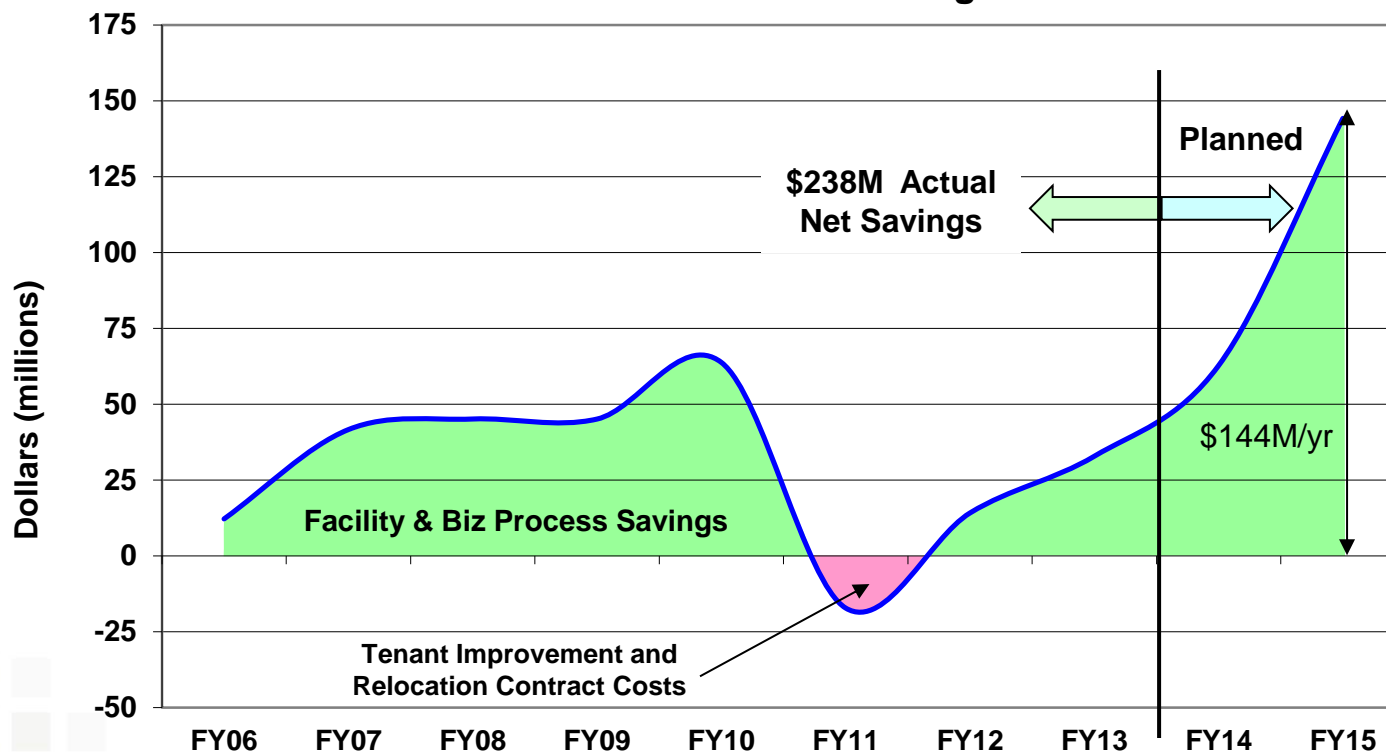
- Use of Class B ovens for small quantity of flammable liquids – pending
- Ultrasonic cleaners using flammable liquids not UL.

Minor

KCRIMS Financial Model

All Sites, Includes Requalification, Excludes Disposition

Annual KCRIMS Costs and Savings - All Sites



Project on track to meet original financial objectives

Summary

- Total cost savings – 25% less operating cost of Old Facility
- State of the Art Fire Protection
- Totally Code Compliant less a few **MINOR** exemptions/equivalencies

- Bldg Code/IFC MAQs – exempted at Old Facility

- More codes to deal with
- Resolution of conflicting codes
- More players
- More paperwork
- More meetings
- AHJ change

Not negative
just me whinning
(workload increase)

QUESTIONS ?